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CENTRAL INTELLIGENCE AGENCY

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Penicillin Factories in USSR

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General.

- The establishment of the penicillin industry in the U.S.L. began with American assistance in 1946. The first plant was established in Moscow. The Soviet penicillin production started first on a small scale in late 1947 or early 1948. A number of additional installations were out into operation in 1948/1949 and production was considerably increased, It rose seven and a half times from 1948 to 1949, according to the press. At present the following seven penicillin factories have been identified in the U.S.S.R.
 - a. Sverdlov Chemical Pharmaceutical Factory in Riev (50°27'11/30°32'E).
 - b. Fenicillin Factory in Leninakan (43050°E).
 - c. Penicillin Factory in Kinsk (53°50°N/27°35°E)
 - d. Fenicillin branch plant of the Butyrski Amiline Dye Factory No 40.
 - e. renicillin Factory of the Karpov Chemical Pharmaceutical Flant.
 - f. Fenicillin factory in Riga (56°58'N/24°06'E).
 - g. Penicillin Factory in Sverdlovsk (56°5E'R.60°40'E). Part of the plant started production in March 1948.

unconfirmed information an additional According to penicillin factory is said to be in the Ear Last, possibly Vladivostok (43 09 N/131050 L). No information is

available on the absolute quantity of production. This document is hereby regraded to CONFIDENTIAL in accordance with the letter of 16 October 1978 from the Director of Central Intelligence to the Archivist of the United States.

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According to one source, penicillin was issued in a hospital only in emergency cases. It can be inferred from this that penicillin production in the block it is at least for below actual requirements. In July 1949, a German chamist made a statement on the quality of the penicillin produced in the block, in which he maintained that the use of povint penicillin was without result in two serious cases of purulent inflammation of the lungs. The subsecuent use of American penicillin resulted in the improvement and complete recovery of both patients within a sort time. At present it cannot be determined whether this was an individual case of adulteration of medicaments, the utilization of waste penicillin production, or a general defect in Soviet penicillin production.

Individual Plants.

- 2. Sverdlev Penicillin Factory in Fiev.
 - a. Location and plant history: This factory is located in the Sverdlov Chemical Pharmaceutical Factory on Saksaganskaya Street at the corner of the Stepanovo Street, about 400 meters northcast of the main rail-road station. (1) The plant was restored after the war and apparently immediately prepared for penicillin production. Building was still under way in May 1942. Operation was scheduled to begin in October 1948 but did not actually start before April 1949. In 1949, the management of the plant was the responsibility of Poviet Calef Angineer mack (Inu), and Deputy Angineer Linbinder (Inu).
 - $b_{\rm o}$ Area and plant installation: The plant covered an area of about 120 \times 100 meters.
 - c. Production: Femicillin is produced, and also insulin. The latter production is deduced from the use of frozen most as basic material. No production figures are known. Production started in April 1948.
 - d. Labor force: About 100 woviets and 120 has were working in one shift, during the period of plant reconstruction. No figures are available on the labor force required for present production.
 - \boldsymbol{e}_{*} Power supply: Power was supplied by the municipal power plant.
- 3. Leninakan renicillin Factory.

One poviet press report on this plant stated it was under construction in epril 1940.

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- 4. Minsk renicillin Factory.
 - a. Pocation and plant history: It is new construction on Tarsaw Street at the corner of Lurazhskaya, 600 meters northeast of the Treight station. (2) At present it cannot be determined whether or not it is the former finsk Phenical on maceutical Pactory, used for the production of pharmaceuticals and veterinary medical compounds. Part of the plant started production in late 1948. It was still partly under construction in April 1949. In march 1949, the plant was managed by Unief Engineer merski (Inu).
 - b. Area and plant installations: The plant covers an area of about 130 x 100 meters.
 - c. Froduction: Fenicillin is produced. No Tigures are available. Fart-time production started in late 1948.
 - d. Labor force: No figures are available.
 - e. Fower supply: Fower was supplied from the municipal power plant.
- remicillin branch plant of the Butyrski Amiline Dye Factory No 40.
 - a. Location and plant history: The penicillin plant is a branch of the well-known Aniline Factory. According to the sources, the plant was built either on the site of the old factory or immediately next to it. An exact location is not available.(3) Part of the plant was put into operation in late 1947. A large extension building was still under construction early in 1949.
 - b. Area and plant installations: No information is available.
 - c. Production: lenicillin, wo figures are available. Froduction started in late 1947.
 - d. Labor force: Two-hundred and fifty workmen were employed in the penicillin factory.
- Fenicillin Factory of the Karpov Chemical Fharmaceutical Flant in Moscow.
 - a. Location and plant history: The penicillin factory is a branch of the well-known Karpov Chemical Flant in the southeastern part of Noscow. (4) The penicillin

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factory was set up in the building of an old industrial installation during 1947/1948. The plant was in full operation in January 1949.

- b. area and plant installations: The plant covers an area of about 150 x 110 meters. A spur track, coming from the north to the plant, was under construction in mid-1945.
- c. Production: Penicillin. No figures are available. Production started in mid-1948.
- d. Labor force: Estimated at five to six nundred people, of which fifty percent were women.
- e. Fower supply: Fower is supplied by the woscow Fower Plant through the transformer station in the plant.

7. High Fenicillin Factory.

- a. Location and plant history: The following points orient the location of the factory: on woscow Street towards the Daugava Miver, 500 Leters southeast of the Daugava River bridge, opposite the synagogue. (5) The construction of the plant started in 1 to 1945/early 1946. The plant presumably was completed in 1949.
- b. Area and plant installations: The plant covers an area of about 100 x 75 meters.
- c. Production: Fenicillin. As figures are available. Part-time production started in May 1748. Outgoing shipments left in round, brown 250-cu.cm bottles.
- d. Labor force: No figures are available.
- e. Fower supply: Fower is supplied from the night Fower Plant through the transformer station in the plant.

8. Sverdlovsk remicillin Factory.

It is known only from the Soviet press that this plant was still under construction early in 1948. However, part of the installation was put into operation. The first penicillin deliveries could have been made on 20 Harch 1948.

25X1A Comments.

- (1) For sketch see whitex 1
- (2) For sketches of this plant installation, see Annexes 2 and 3.
- (3) An asrial photograph of SE August 1943 Indicates that there

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is sufficient space both west and south of the old factory for the construction of such a comparatively small installation. For the location of the Aniline factory, see Annex 4.

- (4) For sketches of the plant and its location, see Annexes 5 and 6. The main objects in these sketches compare favorably with an aerial photograph taken on 22 August 1943.
- (5) For sketch see Annex 7.

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Legend to Annex 1

Miev Fenicillin Factory

- New boiler house, 60 x 50 meters, equipped with three steam boilers to withstand twelve atmospheres, fueled by natural gas. Next to it is a 40-meter metal smokestack.
- 2. Annex building with compressors and a cooling installation. Lext to it a small station regulating the gas supply to the boiler house.
- Room with four centrifuges, and six large and two small tanks.
- A. Room with six vertical tanks of German origin, 6 meters high, 3 meters in diameter. They go through to the upper floor, and withstand twelve atmospheres. The tanks are provided with a stirring device.
- Six smaller vertical tanks, also with stirring devices.
 Next to them are air filters.
- 6. Two German and three emerican compressors are on the ground floor. The upper floor was not yet set up at the time of observation.
- 7. Long room with devices for filling ampoules.
- 8. Room with two pumps and refrigerators.
- An installation consisting of three American air filters occupying the basement, ground floor, and upper floor.
- 10. Offices.
- 11. Open yard.
- 12. Administration building 20 x E x 10 meters.
- 13. Covered passage way.
- 14. Storenouse.
- 15. Food depot.
- 16. Adjacent residential and factory section.

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Legend to Annex 2 Minsk Femicillin Factory.

- Four-story factory building, in operation, 60x25 meters, surrounded by a barbed-wire fence, strictly guarded.
- 2. Complete factory building, three-story structure, 70x25 meters. It was scheduled to be in operation in July 1949. For its installation see Annex 3.
- New boiler house, 25 x 25 x 10 meters, in rough brickwork in April 1949.
- 4. Old bother couse, 20 x 10 x 12 meters. Used as living quarters and office.
- 5. Old metal smokestack.
- dain building in rough brickwork. It was to be completed by 1950.
- imergency power station and steam generation, 15x8 meters, containing a Borsig traction implies.
- 8. Brickwork smokestack
- 9. Residential buildings.
- 10. Small guard nouse.
- 11. Catchtowers.

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Legend to Annex 3

Minsk Penicillin factory. Sketch of the factory building indicated in para 2 of Annex 2.

- I. Ground floor.
 - 1. Laboratories
 - 2. Staircases
 - 3. Fernentation tanks, 6 meters high and 2.8 meters in dismeter, made of polished steel with built-in stirrers. They rise into the upper floor.
 - Ba. Vertical section of two fermentation tanks. At the top each tank has an opening for filling and is provided with a 4 to 6 HF engine.
 - 4. Two compressors, manufactured by the Koeln-Deutz Flant, 3 x 1 x 1 meters, connected with the fermantation tanks by mire lines.
 - 5. Orying room, 2 x 1.5 x 2 meters, lined with 5 mm sheet iron, electrically heated at 5,000 watts; three 40-cm wide conveyor belts run inside the room.
 - Two tanks 1.5 meter high, 3 meters in diameter. They are in a depression about one meter deep.
 - Jooling tanks, 3 x 3 x 3 meters, they look like normal refrigerators.
 - E. Six iron stands with a number of pressure tanks. The stands are 1.5 meters high and have a base of 60 x 60 cm. The pressure tanks are made of a special American alloy. They are 36 cm long, 25 cm in diameter, and have gauges which register up to eighteen atmospheres.
 - 9. Two compressors flanking the stands and pressure tanks indicated in the previous paragraph. They are connected with these tanks by pipes. Size 3 x l x l meters. All tanks and pipes mentioned in paras 8 and 9 are made of a special steel. The pipe lines are marked with the letters UNRA. The working platforms in this department are marked with BRITISH STEEL.

The section with the numbers 10 through 13 is designated the chemical department.

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- 10. Five earthenware basins of 5-cm thickness, 1.2 meters high and one meter in diameter. Each basin has a dipping device made of aluminum which is operated by hand by means of liftinghevice fastened to the ceiling.
- 11. Cooling installation. It consists of a horizontal boiler. Two meters long and 1.2 meters in diameter, made of sheet iron. No additional details are available.
- 12. Tiled drying room, 4 x 3 x 3.5 meters, furnished with wooden shelves. The door closes airtight.
- 13. Cooling room, 6 x 3 x 3.5 meters, tiled, containing four iron tables of 1.8 x 0.8 meters, covered with thick glass plates.

II. Upper floor.

- 1. Laboratory.
- 2. Staircases.
- 3. Fermentation tanks rising from the ground floor.
- 4. Four mixing tanks, 80 cm high, one meter in diameter, equipped with stirrers like the fermentation tanks.
- 5. Autoclave made of cast steel, tested to 250 atmospheres according to the test plaque; four meters high, three meters in diameter.
- 6. Eight aluminum tanks, placed on aniron platform one meter high. They are 1.2 meters nigh, two metersin diameter, and connected by pipes.
- 7. Seven small pressure tanks.
- E. Possible storage room.
- 9. Dressing room for workers.
- 10. Bathroom.
- 11. Toilets.

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Fenicillin Factory in Moscow-Kizhniye Kotly.

- 1. Wooden administration building.
- 2. Guard house
- 3. Factory building, two stories high
 - a. Secret rooms, set up by Soviets only
 - b. Tited workshop with four tanks six meters in diameter, connected by complicated pipe systems.
 - c. Same as para b.
- A large room on the ground floor with eight tanks of the same dimension as those mentioned in para b, blaced in two groups of four each. On the upper floor are three separated rooms; in each are groups of five tanks each, about four meters high and 1.5 meters in diameter. All tanks are connected by pipes.
- 5. Depot and PW Camp.
- Garage and repair shop, and possibly a transformer station.
- Boiler house with three steam boilers, also used as for e and carpentry shop.
- E. Storehouse.
- Residential buildings.

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"egend to Annex 7.

Riga Fenicillin Factory.

- 1. Fump station.
- 2. Well shaft, eight meters deep.
- Power station, two-story structure.
- ump station with two German piston pumps which are two meters long. Connected with the tanks in para
- 5. Iwo underground tanks of 5,000 liters capacity each.
 The tanks are runored to be filled with ether or acetone.
- 6. Old factory building three-story structure.

 Sasement: Compressor station.

 Ground floor: Four or five tanks of 6,000 liters capacity each, placed on 1.5-meter high frames.

 The tanks to through to the second floor. Second floor and third floor: laboratories and some small boiler installations.
- 6a. Plant section already in operation in mid-1948. It is provided with stirring apparatuses (boilers 1.5-meter high mounted with electric motors, with lids on top, and pipe connections).
- 6b. Heating station with a metal and a brick smokestack,
- New factory buildings. Farus 7a, b, c are two-story structures, 7d is a three-story structure.
- 7a. Provided with metal basins, each $4 \times 2 \times 1.4$ meters.
- 7b. Provided with two large ventilators, Pipes are on the wall for cooling purposes.
- 7c. same as 7b.
- 7d. Not used at time of observation. On the upper floor are stirrers with 200 to 500-liter boilers, as well as eight boilers of 1,000 liters each, and five centriluges.
- E. New four-story boiler house with a three-meter metal smokestack. Two brickwork furnaces were planned.
- 9. Residential building.
- 10. Intrance stes.

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